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Family Planning Success in Two Cities in Zaire

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Factors that contribute to the success of family planning programs include developing a strong sense of mission among staff members, ensuring an uninterrupted supply of contraceptives through outlets in many locations, and establishing a system of regular, supportive supervision. Also important: enough organizational autonomy (perhaps through decentralization) to make staff members feel responsible for achieving project objectives.

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Both projects described here, Matadi and Kananga, helped health providers in those two cities offer clinical family planning services. But their approaches differed markedly. PRODEF/ Matadi concentrated on pioneering community-based distribution of contraceptives, with carefully supervised distributors. The Kananga Project emphasized clinical supervision and pleasing the clients; introduced social marketing with loose supervision of retailers; and provided an information team skilled in face-to-face group meetings, plus a weekly radio program.

Four factors common to both projects seemed to contribute to their success:

- The single-minded dedication of staff members to making family planning work.

- An uninterrupted supply of affordable contraceptive methods available through outlets at many locations.

- Enough organizational autonomy to be able to respond to problems as they arose. Such autonomy made project personnel identify more with project goals and feel responsible for achieving project objectives.

- Regular and supportive supervision of those responsible for service delivery. Both projects emphasized regular contact with clinic personnel — Matadi also included distributors. These contacts bolstered morale by showing that the project administration was closely following service providers' activities and by transmitting to providers the staff's enthusiasm for project activities. Supervisory visits included administrative functions such as collecting service statistics and controlling inventory, but these activities were handled in a friendly, nonthreatening manner that encouraged service providers to perform their tasks well.

- Adequate funding. Both projects had special funding that allowed them to experiment with approaches for increasing contraceptive prevalence. That funding may partly explain their organizational autonomy and may have contributed to the sense of purpose and esprit de corps that developed among project staff. Larger-scale programs in Zaire have operated with significant financial constraints, so it would be unfair to compare them with these more successful projects. Special funding does not guarantee project success but may make it far more likely, conclude Bertrand and Brown.

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Family Planning Successes in Two Cities in Zaire

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I. Overview of Family Planning in Zaire

A. Brief Overview of Zaire

Zaire is a geographically large and ethnically diverse country in central Africa with a 1990 population of 36.6 million inhabitants. The country is currently divided into 11 regions, one of which is the capital city of Kinshasa. With a crude birth rate of 47/1000 and a crude death rate of 14, the annual rate of population growth is 3.1 percent, which will result in a doubling of the population in 21 years [1].

Kinshasa, with a population of 2,664,000 at the time of the 1984 census [2], is the heart of political, economic, and social activity. A number of other sizeable cities exist, however, in the interior. The next largest are Lubumbashi (565,000), Mbuji-Mayi (486,000), Kisangani (318,000), Kananga (299,000), Kolwezi (221,000), Likasi (214,000), Bukavu (168,000), Kikwit (149,000), Matadi (139,000) and Mbandaka (137,000).

During the 1980s, many government and private offices in the interior received direction from the central offices in Kinshasa, but routine communication was hampered by the absence of reliable telephone lines or mail service. Air traffic played an important role in linking these cities in the interior to Kinshasa. By contrast, bus service operated only to the cities in close proximity to Kinshasa. Trucks did carry passengers and goods between cities and eventually to Kinshasa, but the distances were long and the conditions difficult. The geographical size of Zaire (comparable to the U.S. east of the Mississippi) and the limitations in communication had a direct impact on family planning in this country, as described below.

B. Family Planning Programs in Zaire

1. Background

In 1972 President Mobutu Sese Seko gave a speech endorsing the concept of birth spacing as a means to improved maternal/child health. The President also coined the phrase "naissances désirables" (desirables births) which became the common name for all family planning activities in Zaire for the next two decades. President Mobutu's speech has been repeatedly cited as evidence of the government's positive stance toward birth spacing, though it should not be interpreted as support of family planning for the demographic objectives of reducing family size or population growth.

The 1972 speech did provide impetus for the development of the Comité National des Naissances Désirables (CNND, National Committee for Desirable Births), which was created as a para-statal entity in 1973 with assistance from the International Planned Parenthood Federation (IPPF). During the 1970s the CNND attempted to increase awareness of the benefits of birth spacing through a limited number of mass media and interpersonal communication efforts. Moreover, the CNND assisted in establishing family planning services at Mama Yemo Hospital, the largest in Kinshasa, and developed a network of "antenna" in existing health clinics throughout Zaire. While some of these antennae clinics maintained close contact with the CNND Kinshasa staff, others simply obtained contraceptive products from the CNND warehouse. During the 1980s, the CNND converted to a totally nongovernmental, private status and changed its name to the Association Zairoise pour le Bien-Etre Familial (AZBEF, Zairian Association for

Family Well-Being). AZBEF established committees in each of the regions of Zaire. Much of the activity of the regional committees was to be based on volunteer efforts. The committees did prove useful in identifying individuals supportive of family planning in each region, though their effectiveness was limited by financial and personnel constraints.

Another important force in the family planning movement in Zaire since the 1970s was the network of Protestant churches, known as the Eglise du Christ au Zaire (ECZ, Church of Christ in Zaire). The individual churches constituting this umbrella organization founded schools and hospitals throughout Zaire long before independence in 1960, and they continue to provide some support to many educational and health facilities throughout the country. A number of Protestant hospitals incorporated family planning as part of their maternal/child health (MCH) services, and in some cases these were antenna clinics of the CNND (though most of the inputs, except contraceptives, were provided through the clinics and hospitals themselves). In 1982 the Eglise du Christ became one of three partners (along with the government of Zaire and USAID) in a large rural health project known locally as SANRU, which includes family planning as one of its activities.

A Contraceptive Prevalence Survey began in Zaire in 1982. Because of severe logistic and communication difficulties, the survey did not attempt a nationwide scope. Instead four urban and two rural areas were selected and sampled independently. Current use of modern contraceptives among women in union in the urban areas was 4 percent in Kinshasa, 8 percent in Lubumbashi, 3 percent in Kananga, and 2 percent in Kisangani. The rural surveys showed 11 percent in Vanga (which had an active Protestant hospital and family planning program) and 2 percent in Nkara (which did not) [3].

In 1983 a national Projet des Services des Naissances Désirables (PSND, Family Planning Services Project) was established with funding from the United States Agency for International Development (USAID). The mandate of this project was to legitimize the concept of family planning and to expand service delivery in 14 cities in Zaire. The project was designed to incorporate services into existing health facilities, not to establish additional (or vertical) family planning services. In certain locations the AZBEF antenna clinics became part of the PSND network for the purposes of supervision and resupply. The primary contributions of the PSND to service expansion between 1982 and 1990 were to (1) train doctors, nurses and counselors in service delivery, (2) provide standard equipment and supplies for clinic-based service delivery, (3) supply and resupply participating outlets with contraceptives (pills, IUDs, condoms, and spermicides; DepoProvera was available to some of these same outlets through AZBEF), and (4) provide periodic supervision. As of 1990, the PSND network included approximately 100 "units" (service delivery points). At the same time the PSND worked to further legitimize the concept of "naissances désirables" (birth spacing) among politicians and the population alike.

Zaire was one of the first francophone African countries to have all three major types of family planning service delivery: clinic-based, community-based distribution, and social marketing. Community-based distribution projects were initiated in 1981 in the Bas Zaire region, in a USAID-funded operations research project directed by Tulane University [4,5]. The initial project, which included household distribution in both an urban and rural zone of Bas Zaire, was the forerunner to an expansion of the CBD approach to other cities in Zaire (Mbuji Mayi, Kisangani and two zones of Kinshasa) as part of the PSND activities. As of 1989 some 270

distributors were working in eight health zones in Zaire. Matadi, one of the two cities described in this paper, was part of the original project, and reflects the benefits of this type of activity.

One of the most successful contraceptive efforts in Zaire has been the social marketing project, initiated by Population Services International (PSI) and funded by USAID; it currently serves as an implementing agency for the Bureau Central de Coordination (BCC) of the National AIDS Committee. This project developed and tested brand names and package designs for the sale of condoms (locally called "Prudence") and spermicides ("Graine"). Commercial sales of these products began in Kinshasa in late 1987 and increased exponentially during the next several years [6]. Part of the success of the social marketing program can be attributed to the growing awareness of AIDS during the late 1980s, since condoms had not traditionally been widely accepted for use within marriage for family planning purposes. However, the parallel brisk sales of the spermicide "Graine" suggest the effectiveness of social marketing for family planning purposes, as well as for prevention of sexually transmitted diseases (STDs).

These activities in service delivery were paralleled by work in the area of population policy, intended to result in an official government policy with demographic objectives for Zaire. Efforts in this area, under the USAID-funded OPTIONS project, led to considerable consciousness-raising among decision-makers in Zaire and to greater acceptance of the concept of family planning. However, a population policy drafted in 1986 had still not been signed five years later.

While the majority of family planning activities in Zaire are supported by USAID, two other important players were IPPF and UNFPA (the United Nations Population Fund). For more than 15 years, IPPF provided contraceptives and program support to its affiliate CNND (now AZBEF). While continuing some support of service delivery, IPPF's main activities by the late 1980's were training and public education, as well as coordination of their regional committees in the interior.

UNFPA in the 1980s helped mainly to develop the Department of Demography at the University of Kinshasa and to support census work of the Institut National de la Statistique (INS). However, in the late 1980s UNFPA became more directly involved in family planning program activity, including support for the information-education-communication (IEC) component of the national family planning program and some contraceptive procurement.

In sum, as of 1990, family planning services existed in the major cities of Zaire, as well as in a number of clinics in rural areas, especially those supported by Protestant churches and/or participating in the SANRU rural health program. Social marketing products were found in the pharmacies of the major cities; and a limited number of zones benefitted from a network of CBD distributors.

Among francophone African countries, Zaire had one of the most diverse family planning programs. However, the effectiveness of the program was limited on one hand by administrative and logistic problems faced by the national family planning agencies, and on the other by socio-cultural barriers to family planning acceptance.

2. Administrative and Logistic Problems

Zairian institutions in the 1980s tended to be administered with strong central authority. Just as there was a well-respected hierarchy in social relations (both at the community and family level), so was there in most government programs. Furthermore, the tendency for top administrators to want to control all aspects of the operation was often further reinforced by the newness of the family planning project activity, the relative inexperience of the staff, and the need to guard against abuse of resources, which was not uncommon in Zairian institutions.

However, centralization posed a major problem in a country where the means of communication with the field were severely limited. A directive from a top administrator could take weeks to travel from Kinshasa to the site in question, and weeks more for the response to return. Often, the communication did not arrive at all. Telephone communication was generally out of the question, and the national postal system was often unreliable and extremely slow. Moreover, because of the distances involved and the need to use costly air transportation to reach the field sites, personal visits between the central offices and field were limited.

Centralization had a negative impact both on program management and on contraceptive resupply. Despite the known importance of supervision in assuring successful service delivery, the national family planning program conducted all supervision from the central level prior to 1989. Given the distances and expense involved, it is not surprising that supervision of the various field sites was sporadic at best. Moreover, in an effort to increase access to family planning services, the limited resources were used to open new sites rather than to supervise existing sites. Beginning in 1989, improvements were made in supervision systems, including the establishment of coordinators in most regions of Zaire, who were better placed to maintain contact with service delivery points. However, the earlier system of central supervision of points in the interior had no doubt diminished the effectiveness of the program.

Centralization also had a negative impact on the availability of contraceptives. The PSND managed the central warehouse for all contraceptives provided through USAID in Zaire. Often the service delivery points did not advise the central office of their needs until their stocks were already low; their messages often took several weeks to arrive; the order then had to pass through several levels of signature in Kinshasa; the contraceptives had to be packaged for shipment; arrangements had to be made with a local air transport company; funds had to be available for covering the shipment; a vehicle had to be freed to deliver the cargo to the departure point; the cargo company had to expedite the packages and assure that they arrived intact at their destination; the recipients had to be notified that the cargo had arrived and they had to find a vehicle to carry it back to their health facility. None of these constituted an insurmountable obstacle, but each represented a delay.

While supervision and resupply were not the only administrative and logistic barriers in the national family planning effort in Zaire, they were perhaps the most important to service delivery during the 1980s. It is notable that both the Matadi and the Kananga projects (described below) developed their own means of ensuring regular supervision and resupply, which may explain in part their success in increasing contraceptive prevalence.

3. Socio-cultural Barriers to Family Planning in Zaire

While it is unwise to generalize to the many ethnic groups and cultures within Zaire, certain values are common to the majority and strongly influence attitudes toward fertility, birth spacing, limitation of family size, and use of contraceptive methods.

Fertility is highly valued in Zaire. Caldwell and Caldwell contend that traditional African religious values have sustained high fertility in two ways. First, they have acted directly to equate fertility with virtue and spiritual approval and to associate reproductive failure or cessation with sin. Second, they have placed both positive and negative sanctions on filial piety and material homage to the older generation so that high fertility is rarely disadvantageous [7]. Frank has similarly commented on the strongly entrenched pronatalist attitudes prevalent in sub-Saharan Africa [8].

Zairians have great respect for their ancestors, and many model their behavior according to the perceived wishes of those who went before them. Given the view that the individual is only one member of the larger and more important clan, many feel a moral responsibility to strengthen their clan by contributing to it numerically. To limit family size purposely, especially to a number lower than 4 or 5, is seen by many as a selfish act of individuals unwilling to make personal sacrifices for the good of the larger society.

The total fertility rate in Zaire (average number of children born to women during their reproductive age) is 6.2 children [1]; this is similar to the number which women report to want and/or to consider ideal. In traditional society, there is great status attached to having a large family. The 1982-84 Prevalence Survey in four urban and two rural areas showed that among women who already have five children, over half would like more [3]. Even with large numbers migrating to a more urban and "modern" environment, the high fertility norms have remained largely intact. Young people rarely aspire to the 10-12 children their parents may have had, but few would voluntarily limit family size to 2-3 children. Underlying this attitude is the constant threat of infant mortality, even to well-to-do families, and the need to have "enough children" in the event that not all survive.

The large family norms are reinforced by a number of factors. First, in rural society children were a much needed source of labor for agricultural activities. While this is no longer the case in the urban areas where 40 percent of the Zairian population now lives [1], the values regarding large families have changed little. In fact, they are often reinforced by the older generation who exert considerable pressure for continuing the tradition of large families. Second, until recently women's participation in the labor force has been limited largely to work in the fields, which could be accomplished with the youngest child on her back, or to petty trading where little ones could play in the market place. Third, even as women have moved into professional and clerical positions, the presence of the extended family, including numerous female relatives available for child care, has allowed women to continue child bearing while maintaining a position in the work force. Fourth, the practice of "foster parenting," especially within the extended family, is also widespread, such that some of the economic burden associated with numerous children can be alleviated at least for short periods of time by sending the children to live with relatives.

In contrast to certain countries in Asia and Latin America where family planning has gained widespread acceptance because couples see a direct connection between fewer children and a better life, this is not generally the case in Zaire. Among the very poorest sectors of the population, it is said that "our children are our only wealth." Moreover, in a system where promotion and advancement in the government and commercial sector are often based on political or familial ties, there may be less motivation to assure each child a good education. Rather, many parents may take the view that by having a large number of children they increase their odds of having a child able to take care of them in their old age. Their hope is that at least one child will be lucky and do well, so that he can in turn provide for his younger siblings, parents and often others within the family.

Closely related to the importance of fertility is a fear of sterility. Persons unable to produce children are subject to pity, mockery and even ridicule. Little consideration may be given to the physiological causes for infertility; rather, it is common to look for "supernatural" reasons, often in the form of sorcery or a curse inflicted on one for some past deed. Because a childless adult has difficulty in attaining the same status as those who bear children in traditional society, the fear of sterility begins early and accompanies one throughout the reproductive years.

Birth spacing has been practiced traditionally in Zaire [9,10,11], and originally took the form of a physical separation of the couple until the new child was old enough to walk or until it was weaned. In many cases the woman returned to her parents' village; in others, she remained with her child while her husband slept with one or more co-wives. Although polygyny was outlawed under Belgian rule, it was never fully suppressed, and vestiges of this system remain in force, though to differing degrees among different ethnic groups within Zaire. Moreover, the mother's sexual abstinence during the post-partum period was often viewed as essential to avoid contamination of the mother's milk while she was still breastfeeding; traditionally abstinence lasted at least one year and often two years after the birth of the child.

Most Zairians find the use of "traditional methods" (abstinence, rhythm, withdrawal, and a traditional belt used to ward off pregnancy) to be a highly acceptable extension of the birth spacing practices used by their ancestors [12]. In contrast to Westerners who tend to dismiss these methods as inconvenient or ineffective, the Zairians who have been interviewed in a number of studies and focus groups to date have embraced these methods without hesitation. By contrast, there is widespread suspicion of modern methods, possibly because they are viewed as leading to disease, sterility and/or marital infidelity (on the part of the wife). This preference for traditional over modern methods is found in all the studies of contraceptive prevalence to date in Zaire [3,5,13], though it may reflect not only attitudes but also limited access to modern contraceptives until recent years.

The widespread use of traditional methods is a sign of desire to control fertility under certain circumstances (often when the youngest child is still under 24 months). This suggests the felt need by the population for some means of pregnancy prevention, which was somewhat satisfied by the traditional methods available to this population. As modern methods have been introduced into Zaire, the initial reaction among the population at large has been one of resistance and skepticism. However, in at least two cities, a part of the population has responded favorably to modern contraceptives when they have been continuously available from readily accessible locations at an affordable cost. Given the limited acceptance of modern contraception to date in

Africa, the experiences of these two cities in Zaire—Matadi and Kananga—merit examination as case studies of family planning success in a francophone African society.

II. Matadi: Clinical Services and Community-based Distribution

A. Characteristics of the City and its Population

Matadi is the ninth largest city in Zaire, with a population of 139,000 in 1984 [2]. It is the only ocean port for the country, located in the region of Bas Zaire, 375 kilometers from Kinshasa by a well-travelled highway. As a key commercial link between the outside world and the capital city of Kinshasa, Matadi is more exposed to influences from the West than are many other cities within Zaire. Because of its proximity to the coast and several generations of Protestant and Catholic groups working in the area, Bas-Zaire is one of the most heavily christianized regions.

In addition, Bas Zaire retains some elements of a matrilineal kinship system. This may have some bearing on family planning, as was seen in a study of attitudes toward voluntary cessation of childbearing [14]. While there was still a desire for large families in Bas Zaire, the husband's family was less likely to exert pressure for continued childbearing in this area than in other regions of the country. These and other factors may account for the fact that in one assessment of areas in sub-Saharan Africa most likely to accept modern family planning, the region of Bas Zaire was cited as one of the potentially receptive areas [15].

A 1981 survey of women of reproductive age in Matadi indicated that 42 percent had attended some grade of secondary school; 68 percent reported they were able to read. The respondents were primarily Christian: Protestant (44 percent) or Catholic (43 percent). The mean age at first marriage was 17.5 years, and 10 percent of married women reported they were in polygynous marriages. Childbearing generally began before age 20 in this population, and by their mid-twenties, over 90 percent of the women had been pregnant at least once. Completed fertility was 7.8 among those 45-49 years old [11].

Prior to 1981 contraceptives were available in Matadi from two main sources: (1) private pharmacies, where they were prohibitively expensive, and (2) an AZBEF-supported clinic which offered services several days at week, but had periodic stockouts of certain contraceptives. In the early 1980s several local doctors went abroad for training in tubal ligation. This service was available through three facilities in Matadi by the mid-1980s (though a large number of the tubal ligations performed were for medical reasons, not "elective" for contraceptive purposes only). From 1985-89, the number of operations performed for the three facilities combined ranged from 70-84 per year. With these services available, the prevalence of modern contraceptive methods in Matadi in 1981 was 4 percent [5].

Beginning in 1981 service delivery expanded through three mechanisms: (a) the PRODEF project, (b) a reinforcement of clinic-based facilities with the support of the national family planning program, and (c) the increased availability of tubal ligation. PRODEF was designed and implemented before the national family planning program officially began in 1983 and so played a catalytic role in family planning services in Matadi. Collectively these efforts resulted in the highest level of modern contraceptive use of any city in Zaire, and one of the highest reported

in a francophone African country. It is useful to view the activities of Matadi in two phases, 1981-83 and 1984-89, first because prevalence data are available for 1981, 1983, and 1989; second, because it was after 1983 that the sources of service delivery other than PRODEF grew in importance in Matadi.

B. 1981-83: the PRODEF Project

PRODEF stands for the Programme d'Education Familiale or Family Education Program, which was the name given to the original Bas Zaire operations research project under the auspices of the Communauté Baptiste du Zaire Ouest (CBZO, Baptist Community of West Zaire) with technical assistance from Tulane University. Our discussion in this paper concerns only the PRODEF activities in the city of Matadi. The original project also included a rural area of Bas-Zaire and later extended to several other cities. In fact the name PRODEF became synonymous with all community-based distribution (CBD) of contraceptives in Zaire.

The main objectives of the original PRODEF/Matadi effort (1981-89) were to increase women's knowledge of modern contraceptive methods, to improve their attitudes toward family planning and to increase the percentage of married women of reproductive age who used modern contraceptive methods. The second phase (1984-89) provided the opportunity to evaluate the cultural acceptability of CBD in an urban setting and the long-term impact of family planning interventions on contraceptive prevalence in this area.

1. Project Design of PRODEF, Phase I

The city of Matadi has three administrative districts. The majority of the population lives in the districts of Nzanza and Mvuzi, which have been the target areas studied in the three prevalence surveys to date. The third administrative district was excluded from the project (and thus from study) because it consisted of (a) well-placed administrative officials and business people who could afford to obtain services from other sources, and (b) a low income population similar to that found in Nzanza and Mvuzi, living in highly dispersed housing over a large, hilly terrain. It was felt that project resources would be more efficiently used if they were concentrated in the very densely populated areas of Nzanza and Mvuzi, rather than spread to this third administrative zone as well.

Within Nzanza and Mvuzi were a number of dispensaries, health posts and health centers. These facilities were managed by churches, government, parastatals, or private businesses. Their outpatient clinic services varied greatly; some were well-managed and well-supplied, while others were quite poor. PRODEF sought to add or upgrade family planning services alongside the ongoing clinic activities. In addition, PRODEF planned a test of the feasibility and effectiveness of community-based distribution (CBD) of contraceptives.

In Phase I, the target population was divided into two treatment groups ("zones") for the purposes of testing alternative strategies. In Zone A, the nurses in four government and church-operated clinics were trained in family planning service delivery, and these clinics were supplied/resupplied with free contraceptives to sell to clients. In addition, an extensive outreach program was undertaken, consisting primarily of home visiting and the free household distribution

of contraceptives. In Zone B, four clinics benefitted from training of nurse personnel and supply/resupply of contraceptives, but there was no outreach.

The basic difference between the two approaches in zones A and B was the outreach component. A team of 10 home visitors attempted to contact all households in Zone A during three successive rounds of home visiting, which took place approximately six months apart. The home visitors were women between the ages of 20 and 35. The home visit included a discussion with the woman (and, if possible, her husband), covering the benefits of child spacing and describing the different contraceptive methods available. If the client was interested, the visitor provided her with one free sample of contraceptives (either the pill, condoms, or spermicides, although the pill was given only to women judged to be eligible according to a checklist of contraindications). The visitor also gave a coupon to be redeemed for one month's resupply from a participating clinic. After using the coupon, the client had to pay a nominal fee for resupply.

2. Results of the 1983 Followup Study

It was hypothesized that under the PRODEF project the strategy including the outreach component in Zone A would result in significantly higher levels of contraceptive prevalence than in Zone B. In fact, the use of modern methods increased from the baseline level of 4 percent in 1981 to 19 percent in Zone A and to 16 percent in Zone B in 1987. While the percentage was higher in the area with outreach (Zone A), the difference was not statistically significant. Moreover, the cost per couple-month-protection (CMP) was slightly higher in the area with outreach [5].

These results indicated (1) that the target population was in fact receptive to modern methods, based on the level of contraceptive prevalence (17 percent for Zones A and B combined) that was achieved in a period of less than 24 months, and (2) that the outreach strategy did not have much additional impact above and beyond simply making the contraceptives available at low cost in local health centers/posts. These results served as the basis for modifying the program design in Phase II.

C. 1984-89: Expanded Family Planning Activities in Matadi

1. PRODEF Project, Phase II

During Phase II of the PRODEF/Matadi project, both zones were combined into a single approach for the entire target area. The number of health clinics participating in the project varied from six to nine during this second phase; they were still supplied regularly with contraceptives, but salaried home visitors were no longer used in zone A. Instead, "home depots" were set up in both zones. Unsalaried community residents stocked contraceptives in their homes and sold them to friends and neighbors at a small commission. The distributors sold the pill (to women judged eligible on a checklist of contraindications), condoms, and spermicides; in addition, they were instructed to refer clients desiring IUDs, DepoProvera or tubal ligation to appropriate clinical facilities for these methods. While these CBD workers were expected to sell products from their home, they were also encouraged to circulate in their neighborhoods, making their services known to neighbors and thus incorporating some of the outreach activity which had previously been assumed by the home visitors.

Thus, the main intervention in Phase II of the PRODEF project consisted of establishing a network of 40 CBD workers in Matadi. Specific activities included (1) recruiting and training the CBD workers, (2) retraining the nurses in the eight health clinics participating PRODEF, Phase I, (3) supervising and resupplying the CBD workers and clinic nurses monthly, and (4) collecting statistics on the volume of contraceptives sold by distributor or clinic each month.

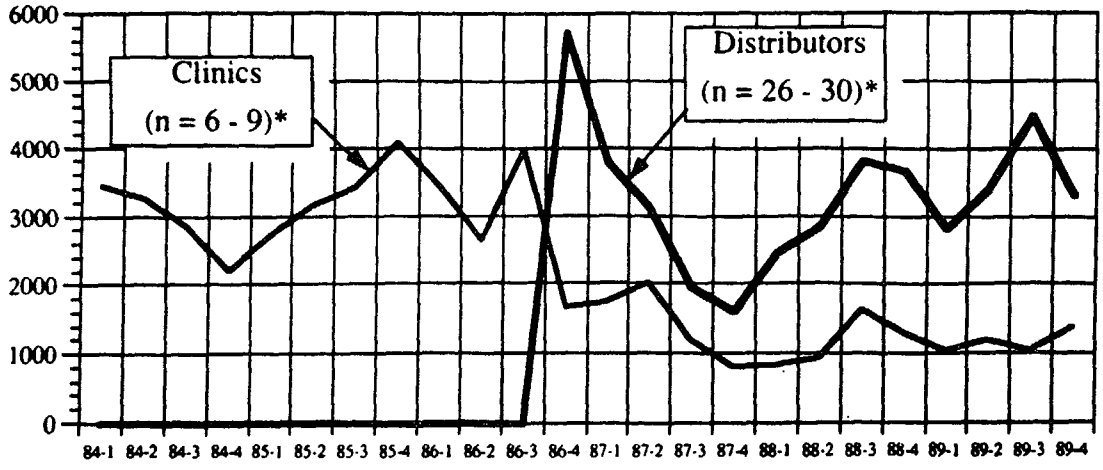
A total of 26 CBD distributors were recruited and trained in late 1986. A second effort was made in the second quarter of 1988 to recruit and train additional distributors to replace those who dropped out or were relatively inactive. While the total number ever trained was over 40, the number of active distributors remained at 25-30 over most of the life of the project. Turnover was low, in contrast to what is characteristic of CBD programs worldwide. This is most likely attributable to the supportive management style which provided the CBD workers with motivation to remain involved in the activity. Their costs of doing so were low, and they received both monetary benefit and a sense of personal satisfaction at being part of a pioneering activity. (this aspect is discussed in greater detail in section E, "Reason for Success.")

Figure 1 shows the output of PRODEF distributors and of PRODEF-related clinics. This graph indicates that the output from PRODEF clinics remained at fairly constant level of approximately 3200 CMP per trimester (roughly 1000 active users) from early 1984 until the third quarter of 1986. When the network of home-depot distributors was established in October 1986, the output from the PRODEF clinics dropped markedly, to an average of 1,282 CMP (roughly 425 active users) from late 1986 to the end of 1989. The data suggest that some clients who previously obtained supplies at these clinics instead purchased them from the distributors.

Figure 1

Couple Months of Protection for PRODEF/Matadi

By Trimester and Type of Provider, 1984-1989



* Number active during any given trimester

Contraceptive sales among the distributors were the highest at the beginning of their work (the fourth trimester of 1986), decreased through 1987 and then gradually increased again in 1988-89. This peak during the first months of sales deviates from what one might normally expect, i.e. a gradual increase in sales as distributors become more familiar with the task and as community members acquire the routine of buying from them. However, this phenomenon of high sales during the first trimester post-training has been seen in four other CBD project sites in Zaire, and appears to be a combination of (1) initial enthusiasm on the part of distributors and (2) possible bulk sales outside the target area, which were subsequently curtailed by project staff.

2. PSND/AZBEF clinics

Two important events took place in the mid-1980s in family planning service delivery. First AZBEF, the private FP association in Zaire, posted in Matadi a regional representative whose job was originally to supervise activities in Matadi and in several smaller cities of the region. This individual worked closely with PRODEF from the start, though he was not responsible for PRODEF activities.

Second, PSND, the national family planning program, began activities in 1983; it targeted Bas Zaire as one of the first regions for the expansion of service delivery, so PSND and AZBEF became partners in the Matadi effort. Activities included identifying the largest providers of maternal and child health (MCH) services in the city; recruiting them to increase their family planning services, training a number of doctors and nurses in service delivery, providing them basic gynecological equipment, and supplying them with contraceptive products (pills, IUDs, condoms, spermicides, and DepoProvera).

The six service providers incorporated into the new PSND/AZBEF efforts included one AZBEF-supported clinic (STOP), two employee-based health clinics (ONATRA and AMIZA), two hospitals (Kinkanda and Central), and a health center (Mama Mobutu). Whereas PRODEF-related clinics were geographically dispersed through the target area and available to all residents, the PSND/AZBEF clinics tended to be located in the center of town and in some cases were only open to workers of specific companies; yet these facilities generally served a much larger clientele than did the PRODEF-assisted outlets.

The main PSND/AZBEF activities were routine supervision and resupply of these sites. The AZBEF coordinator for Bas Zaire served as the on-site representative for this activity until 1989, when the PSND also posted its own regional coordinator in Matadi as part of a national effort toward decentralization.

Table 1 shows the volume of contraceptives sold by PRODEF "home-depot" distributors, PRODEF-related clinics, and PSND/AZBEF clinics from 1984 to 1989. The quantity of each contraceptive sold has been converted to couple-months-protection (CMP) for this table. PRODEF distributors provided 5700 to 14,000 CMP per year, while PRODEF clinics provided 4600 to 13,300 CMP per year. The PRODEF totals of 11,700 to 18,600 CMP are equivalent to 1000-1500 active users per year. The PSND/AZBEF clinics provided 3500-5500 CMP per year, which is roughly equivalent to 300-450 active users per year.

Table 1.
Couple-Months-Protection (CMP) Provided by PRODEF and PSND/AZBEF Outlets in Matadi: 1984-1989

Year Quarter	PRODEF			PSND-AZBEF
	Distributors	Clinics	Total	Clinics
1984				
1	---	3,424	3,424	n/a
2	---	3,243	3,243	n/a
3	---	2,832	2,832	n/a
4	---	2,187	2,187	n/a
Total	---	11,686	11,686	n/a
1985				
1	---	2,709	2,709	1,137
2	---	3,147	3,147	1,170
3	---	3,402	3,402	1,289
4	---	4,060	4,060	1,545
Total	---	13,318	13,318	5,141
1986				
1	---	3,417	3,417	1,549
2	---	2,633	2,633	1,138
3	---	3,967	3,967	1,344*
4	5,728	1,641	7,369	1,470
Total	5,278	11,658	17,386	5,501
1987				
1	3,775	1,734	5,509	n/a
2	3,106	1,997	5,103	n/a
3	1,963	1,177	3,140	n/a
4	1,605	786	2,391	n/a
Total	10,449	5,694	16,143	n/a
1988				
1	2,425	831	3,256	650
2	2,838	978	3,816	1,147
3	3,782	1,629	5,411	929
4	3,654	1,289	4,943	789
Total	12,699	4,727	17,426	3,515
1989				
1	2,803	1,039	3,842	1,146
2	3,411	1,180	4,591	1,071
3	4,480	1,030	5,510	737
4	3,286	1,356	4,642	734
Total	13,980	4,605	18,585	3,688

n/a Reliable data not available.
* PSND/AZBEF clinics did not submit service statistics for trimester 3 of 1986; thus, the figure given here was an estimate based on the two preceding trimesters.

3. Tubal ligation services

A small number of tubal ligations were performed on women in Matadi prior to 1981, since in the 1981 survey 1.5 percent of the women in union reported having had this procedure. (Given that tubal ligation was not promoted for contraceptive purposes in Matadi prior to 1980, it is likely that these operations were done for medical reasons.) In the early 1980s several local doctors were sent abroad for training in laparoscopy, and by 1985 tubal ligation was available from three sites in Matadi. Between 1985-1989, the three facilities combined performed a total of 379 tubal ligations, for an average of 76 per year.

4. Pharmacies

Pharmacies in Matadi continued to stock contraceptives in the 1984-89 period, totally independent of any of the above mentioned activities, as a standard private sector activity. By 1989 some of the social marketing products (condoms and spermicides) had found their way into local pharmacies, but the social marketing project had not formally begun distribution activities in Matadi at the time of the 1989 PRODEF followup survey.

There is no systematic monitoring of contraceptive sales in pharmacies, such as is done in the PRODEF and PSND/AZBEF outlets. Thus, it is difficult to assess the contribution of this source of services to family planning use in Matadi over this five year period. However, data from the 1989 followup survey do provide information on the percentage of users who obtain their supplies from this source.

D. Indicators of Success in Matadi: Three Contraceptive Prevalence Surveys

1. Knowledge of Contraceptive Methods

Given the relatively limited availability of modern contraceptives in Matadi prior to 1981, a surprisingly high percentage of the population already knew at least one modern method: 86 percent of women 15-49 years old in the 1981 survey. This percentage increased to 97% by 1983 and remained at 97 percent in the 1989 survey (see Table 2). The percent of respondents who knew at least one traditional method was similarly high: 95 percent, 98 percent, and 94 percent on the 1981, 1983 and 1989 surveys respectively.

As would be expected, exposure to messages on family planning also increased dramatically over this eight-year period, as shown in Table 2. The percent having seen or heard something about family planning increased over 40 percentage points between 1981 and 1989 for radio, television and posters. Over this period radio was by far the most frequently mentioned medium, followed by television.

2. Ever Use of a Modern Contraceptive Method

"Ever use" of a contraceptive method is an indicator of the degree to which the target population has experimented with family planning. While the ultimate goal of a program is to retain active users, it is also important to promote experimentation among a large part of the population as part of the adoption process.

Table 2.
Knowledge of Contraceptive Methods and Sources of Information Among Women 15-49 Years Old in Matadi

	1981 n=1797	1983 n=1794	1989 n=1615
KNOWLEDGE:			
Percent that have heard of:			
At least one modern method	86.1	97.0	96.7
At least one traditional method	95.1	98.5	94.1
SOURCES OF INFORMATION:			
Percent of women 15-49 who had heard something on family planning via:			
Radio	49.2	--	80.9
Television	5.6	--	50.7
Brochure	10.6	--	39.1
Poster	4.9	--	46.6
Doctor, nurse	--	--	27.4
Group meeting	--	--	25.6
Newspaper, magazine	4.7	--	17.0

-- Not available

As of 1981, 10 percent of ever-married women had ever used a modern contraceptive method. This proportion increased dramatically to 46 percent in 1983, suggesting the impact of the early PRODEF activities, which included household distribution of contraceptives. As of 1989, 64 percent of ever-married women reported they had experimented with at least one modern method in the past (Table 3).

3. Current Use of a Modern Contraceptive Method

Contraceptive prevalence refers to the percentage of women married or in union who report current use of a contraceptive method. It is the primary indicator used in evaluating the effectiveness of family planning interventions among the general population for a given location (city, region, country).

Data from the three PRODEF surveys show a dramatic increase in the percentage of married women 15-49 years old using a modern contraceptive method: from 4 percent in 1981 to 17 percent in 1984 (Zones A and B combined) and then to 23 percent in 1989. The most commonly used modern methods in 1989 were the pill (11 percent of married women) and tubal ligation (8 percent). See Table 3.

While 23 percent would be considered low contraceptive prevalence by the standards of some countries in Asia and Latin America, it is one of the highest levels reported for a site in a francophone African country. Moreover, it is the highest reported to date in Zaire, as shown by the summary of data on contraceptive prevalence available to date from different sites in Zaire

Table 3.
Use of Contraceptive Methods Among Married Women 15-49 in Matadi

	1981	1983	1989
PRIOR USE (based on ever married women):	n=1318	n=1185	n=1014
Percent that have ever used:			
A modern method	10.0	45.8	63.9
A traditional method	79.4	86.0	85.8
CURRENT USE (based on currently married women):	n=1256	n=1064	n=818
Percent that have ever used:			
A modern method	4.4	17.5	22.9
A traditional method	52.6	36.8	28.8
Any method	57.1	54.3	51.7
Method currently used:			
Withdrawal	33.1	22.2	16.0
Abstinence	14.0	13.1	[illegible]
Pill	1.8	7.7	10.6
Female sterilization	1.5	4.8	7.6
Vaginal tablets	0.0	2.1	0.9
Condom	0.6	1.1	2.0
IUD	0.0	0.5	0.0
Injectable	0.6	0.8	1.7
Rhythm	2.9	1.0	5.5
Foam, cream	0.0	0.4	0.1
Other	2.6	0.5	0.0

(Table 4).

These prevalence data reflect a gradual replacement of traditional methods with modern ones. Despite the marked increase in modern methods between 1981 and 1989, the single most widely used method in 1989 was still a traditional one: withdrawal (16 percent). In addition, 7 percent reported used of abstinence and 6 percent rhythm, bringing to 29 percent the proportion using a traditional method in 1989. The combined percentage using any method—modern or traditional—was 52 percent in 1989 (Table 3).

4. Source of Contraceptives

With regard to the source of contraceptive method, the most frequent responses among 1989 users of modern contraceptives were hospital (34 percent), clinic (23 percent), pharmacy (19 percent), and distributor (11 percent). However, based on these data alone, it is difficult to determine precisely the relative contribution of each of the four service delivery mechanisms

Table 4.
Prevalence of Current Use of Modern Contraceptives Among Married Women of Reproductive Age in 10 Sites in Zaire

Location	Year of Survey	Percent Using Modern Method	Research Group
URBAN:			
Matadi	1981	4%	PRODEF/Tulane
	1984	17%	PRODEF/Tulane [5]
	1989	13%	PRODEF/Tulane
Kinshasa	1982	4%	INS/Westinghouse [3]
	1988	6%	PSND/Tulane
Lubumbashi	1982	8%	INS/Westinghouse [3]
	1982	3%	INS/Westinghouse [3]
	1987	4%	IMCK 18]
Kananga	1990	17%	IMCK [20]
	1982	2%	INS/Westinghouse [3]
Mbuji Mayi	1986	3%	PRODEF/PSND/Tulane [23]
	1986	1%	PRODEF/PSND/Tulane
RURAL:			
Nsona Mpangu	1981	3%	PRODEF/CBZO/Tulane
(Bas Zaire)	1984	12%	PRODEF/CBZO/Tulane
	1988	8%	PRODEF/CBZO/Tulane
Vanga (Bandundu)	1983	11%	INS/Westinghouse [3]
Nkara (Bandundu)	1984	2%	INS/Westinghouse [3]
Sona Bata (Bas Zaire)	1986	3%	PRODEF/CBZO/Tulane
	1988	6%	PRODEF/CBZO/Tulane

listed above (PRODEF, AZBEF/PSND, tubal ligation service, and pharmacies) to contraceptive use in Matadi for two reasons. First, both PRODEF and AZBEF/PSND supported FP activities in clinics. Second, both PRODEF and the AZBEF/PSND centers may have been a source of referrals for tubal ligations at the hospital.

Data on the source of different contraceptives provide further insight into use patterns among this population. Among pill users (n=86), the most commonly cited sources were a clinic (52 percent), pharmacy (21 percent), hospital (14 percent), and distributor (7 percent). All (n=62) women who had undergone tubal ligation cited the hospital as their source. Women whose partners used condoms (n=16) named the pharmacy (38 percent), hospital and clinic (19

percent each), or the distributor (13 percent) as the primary source. Among users of DepoProvera (n=14), two-thirds cited the hospital, one-third a clinic.

In sum, the clinics and pharmacies played the major supply role in Matadi, even for the contraceptives available from community distributors.

5. Knowledge of and Contact with PRODEF distributors

On the 1989 followup survey, respondents were asked about the PRODEF program in particular. Among married women, 29 percent recognized the name "PRODEF" and virtually all of this group associated the name with family planning. Eight percent knew a community worker for family planning (presumably the distributor) and all of these could identify the person by name. However, only three percent of married women had purchased contraceptives from this person.

6. Observations Regarding Contraceptive Prevalence in Matadi as of 1989

While the percentage of couples using a modern method increased over time in Matadi, the percentage using traditional methods decreased. The percentages in 1981 vs. 1989 using withdrawal dropped from 33 to 16 percent, while abstinence decreased from 14 to 7 percent; rhythm on the other hand remained fairly constant at 3-6 percent over the three studies.

In short, the patterns of contraceptive use in Matadi suggest a gradual substitution of modern for traditional methods. The percentage using ANY method has changed relatively little over this 8 year period, varying from 52-57 percent. While some might argue that there was little real change, it is generally recognized that the effectiveness of modern contraceptives is in fact higher than that of withdrawal and rhythm.

Analysis of the Matadi experience would be greatly enhanced by the existence of a comparison group, which would have allowed for an assessment of what would have happened in the absence of any FP intervention. However, given the difficulty of identifying a "similar" population and the unacceptable option of denying family planning services to such a population for the purposes of research, one must instead use the available data from Matadi to assess the relative contribution of different service providers to "success" in this city.

The situation is more clear-cut for the period 1981-83 than for 1984-89, because the only major change in service delivery during the earlier period involved the implementation of PRODEF activities. The change in prevalence from 4 to 17 percent during that period reflected the important contribution of the PRODEF program to achieving a major increase in the use of modern contraceptive methods.

By contrast, during the period 1984-89, PRODEF continued to function through 6-9 clinics (the exact number varying over time) and 25-30 distributors. In addition, services were established/reinforced in the six PSND/AZBEF facilities, and tubal ligation continued to be available. The data on source of contraceptives as of 1989 reflect a diversity of providers, the choice of which was related to the method used. The service statistics from PRODEF vs. PSND/AZBEF clinics indicate that both delivered a fairly constant volume of contraceptives to

this population between 1985-89, though PRODEF provided two to five times more CMP than did the PSND/AZBEF clinics over this period.

In sum, by 1989 contraceptives were available in Matadi through clinics, CBD distributors and pharmacies; in addition, tubal ligation could be obtained from a centrally located facility at an affordable price. While the main increase in prevalence (from 4 to 17 percent) occurred prior to this diversification of services, the further increase (from 17 to 23%) appears related to this diversification, especially since relatively few users reported obtaining their contraceptives from PRODEF distributors or PRODEF clinics as of 1989. Access to modern contraceptives from multiple sources emerges as one of the main factors in the success of the Matadi program. However, other conditions played a role as well, as outlined in the next section.

E. Reasons for Success in Matadi

It has been postulated that there are at least seven conditions for successful development programs, as follows [16]:

- initial focus on a single goal or service
- sequential diversification of goals
- phased program implementation
- organizational autonomy
- the use of network structures
- the use of simple information systems with fast feedback
- flexible selection and training processes.

This set of conditions provides a useful framework for examining the case of Matadi. Given that the PRODEF project clearly served as the catalyst for the major increase in prevalence (from 4 to 17 percent in the 1981-83 period), this section focuses principally on PRODEF, yet touches on the other service providers where appropriate.

1. Initial Focus on a Single Goal or Service

In the PRODEF/Matadi project, family planning was the only intervention. Originally the family planning component was to be integrated with the sale of basic medications, in line with the national policy of health care integration. When the project was implemented in 1981, however, the sale of these basic medications was seen to conflict with the economic interests of existing health care providers, and thus it was not approved. By contrast, few providers had any vested interest in contraceptive sales, so the family planning component was approved for implementation. Thus, due to these particular circumstances, PRODEF/Matadi had a single focus: family planning.

The hospitals and clinics related to the PRODEF project did have a much broader mandate: to provide general curative care and MCH activities. On one hand, this mandate may have diluted their commitment to family planning. On the other, it put personnel in contact with the population most in need of family planning services (mothers with small children) and allowed clients more privacy in obtaining contraceptives, since their presence at an MCH clinic did not brand them as family planning users.

In sum, a project (PRODEF) with a single focus (family planning) had community distributors solely for contraceptives; it also enabled multipurpose clinics to incorporate family planning into their services.

2. Sequential Diversification of Goals and Phased Program Implementation

Within the PRODEF/Matadi project the main objective since the onset of the program was to increase the acceptance of modern contraceptives; diversification of goals was not an issue. However, the program design was modified, based on the field experience. The original household distribution of contraceptives was conducted during an 18-month period as a means of rapidly increasing awareness of family planning among this population. For a period of almost three years afterwards, services were available only through clinic-based facilities and pharmacies. Subsequently, the home-depot approach to CBD was tested. The contraceptives made available through the CBD activities remained the same throughout (pills, condoms, spermicides), though the service delivery modes evolved over time.

Among other service providers, phased program implementation aptly describes the incorporation of family planning into the ongoing delivery of MCH services. In five of the six PSND/AZBEF facilities, MCH activities were fully operational at the time contraceptive services were added.

Data are not available to assess the degree to which contraceptive users switched between service providers in Matadi, nor to track the direction of such moves. For example, the extent to which CBD distributors referred clients to clinic-based facilities for clinical methods is unknown. What is clear is that by 1989 the population of Matadi had ample choice in terms of contraceptive methods and sources, and this is believed to be a key factor in the level of prevalence which has been achieved.

3. Organizational Autonomy

In the case of PRODEF, organizational autonomy was an important part of its early success. Because PRODEF was established prior to the national family planning program (PSND), it had a separate identify which it retained, even after the PSND became established. While PRODEF depended upon the PSND from 1985 onward for its contraceptive supplies, it otherwise operated independently until late 1989 when it was incorporated into the national program.

There were other factors related to the organizational culture which appear to have contributed to the effectiveness of the PRODEF project, especially during its initial phase. First, the management style was less hierarchical than is traditional in Zairian organizations. The program was directed by a well-respected local doctor, yet he made major decisions regarding program activity in consultation with the deputy director and expatriate advisor. The director and deputy director established their authority by example: sincere commitment to the program, long working hours, participation in fieldwork activities where amenities were lacking. As a result, an *espirt de corps* developed among the project staff that is often absent in government programs in Zaire.

Second, the management style of the project directors was friendly, not punitive. Nonetheless, they communicated to subordinates their expectations regarding performance, such that "friendly" did not mean lax. Similarly, the supervisor of the distributors maintained a cordial but regular contact with the distributors. This man was energetic and dynamic. If a distributor low on stock did not visit the central office, the supervisor attempted to visit that distributor at her home depot each month. His approach to the task also helped to reinforce distributor motivation.

Third, when PRODEF began in 1981, the directors realized that this type of project was highly innovative, not only for Zaire but for francophone sub-Saharan Africa as well. They enjoyed their role as pioneers and worked hard to assure the project would live up to expectations. The pride they felt in their work was further reinforced by the reports and publications which began to emerge from this project and brought them recognition not only in Zaire but in the larger international family planning community. In this sense, the results were biased by a "Hawthorne effect" (i.e. improved performance because the subjects realized they were under observation). At the level of supervisors and distributors, t-shirts and metal signs with the PRODEF logo proved highly useful in sustaining motivation and increasing a sense of identification with the program.

Whereas PRODEF had a great deal of organizational autonomy, the PSND/AZBEF clinics by definition were part of a larger national structure. However, in comparison to other clinics elsewhere in the country belonging to this same network, they may have been relatively favored by the fact that (a) a full-time regional coordinator was posted in the city of Matadi in 1985 and thus could follow activities more closely, (b) the transport/communication systems between Matadi and Kinshasa were better than for other Zairian cities, a fact which tended to reduce stockouts and facilitate consultation as problems arose, and (c) the PRODEF experience prior to 1985 bolstered the confidence of the regional coordinator that family planning would be acceptable in this milieu.

4. Use of Network Structures

When PRODEF/Matadi was established in 1981, the public health infrastructure of Matadi was very loosely organized. The part-time director of PRODEF/Matadi was in fact the chief medical officer for a neighboring church-related rural health district (Nsona Mpangu) and lived there. As such, the PRODEF director did not have an official role within the Matadi infrastructure and was an "outsider" to the political scene in Matadi. Thus, networking was essential.

From the start, the PRODEF staff worked closely with the local civil authorities in discussing the proposed design of PRODEF activities. The Medical Officer for the region of Bas Zaire had to approve the program. Also, since Matadi was the principal city in the region, the project staff kept the Governor of the region appraised of all project activity. While the idea of using an outsider to direct a local project is by no means presented as a model, it reflects on the abilities of the PRODEF staff to maintain strong working relations with the local authorities.

A three-day seminar held in Matadi in 1985 served to further cement the good will between those responsible for family planning and the local authorities. Over 80 local dignitaries and other key persons were invited to attend this activity, which was fairly unusual for a city the

size of Matadi. The program included a review of Phase I of the PRODEF experience and a discussion of future directions.

Another institutional link which seemingly benefitted the PRODEF activity was its relationship with the Communauté Baptiste de Zaire Ouest (CBZO, Baptist Community of West Zaire). The project was actually carried out under the auspices of CBZO, although there was little direct input from CBZO into the daily management of this project. While the benefits of this association are impossible to quantify, it helped legitimize this potentially controversial activity.

In contrast to other cities in Zaire where conflicts developed over the issue of "turf" in evolving family planning programs, the personnel of the different projects in Matadi largely avoided this type of conflict. Both the regional AZBEF coordinator and the Chief Medical Officer for Matadi served as consultants to the PRODEF project. In turn, PRODEF staff assisted in the PSND/AZBEF activities as appropriate. In 1987 the PSND hired the PRODEF/Matadi director to work with the national program, and in 1989 they employed the PRODEF consultant responsible for mass media as their regional coordinator. In short, the liaisons among those responsible for the different FP activities in Matadi were positive.

5. Flexible Selection and Training Processes

Because of the organizational autonomy which PRODEF had, it was not unduly constrained in its hiring procedures. The selection was somewhat more personalistic than some might consider desirable, but it generally yielded persons who were known to the project directors to be dependable and hard working.

In the early 1980s, most paid employees in health related activities in Zaire were male. It was unusual that the PRODEF director selected a woman as Deputy Director of the project. Most persons subsequently hired for either the survey activities or the home visiting were women, because of the need for them to be able to communicate easily with other women on the topic of family planning.

The home visitors, nurses at the PRODEF facilities, and later the distributors underwent initial training sessions and then periodic refresher training, which were conducted in Matadi. All project staff and consultants participated in this training, which tended to be very field-oriented. Role playing was used frequently to analyze problems and identify solutions. Some effort was made to assure that the main points covered in the training were retained and applied by the distributors at the field level, through a subsequent assessment (test) of their knowledge of key points regarding the contraceptives they sold and through observation of their interactions with actual clients. This process identified those most in need of additional on-the-job training during subsequent supervisory visits.

The PSND/AZBEF program differed from PRODEF in both recruitment and supervision. This effort depended largely on individuals who were already working in the participating hospitals and clinics; thus, once a facility was chosen to participate in the program, the recruitment of specific staff was not an issue. Training was offered for doctors and nurses who would be providing the family planning services. It consisted of a 4-week course held in Kinshasa, which covered a much broader range of topics, some of which were more theoretical than field-oriented. This training did have the advantage of putting service providers in contact

with their counterparts in other regions and gave a much broader view of family planning than did the PRODEF training.

6. Other Aspects Contributing to Matadi Success

From its start, PRODEF enjoyed the support of a local radio programmer/announcer, who was later hired as a consultant specifically to promote family planning via the mass media and who was eventually chosen by the PSND to be its first regional coordinator in Bas Zaire. The project did not have a regular radio program, but this individual kept family planning in the public eye both through radio and in person. By 1989, 81 percent of the women of reproductive age had heard something on the radio regarding family planning, compared to 49 percent in 1981. While it is impossible to quantify the impact of this programming on the demand for family planning services, it almost certainly contributed to the acceptance of modern contraceptives.

One of the most common problems in health programs in Zaire is a lack of material resources. When salaries are late or do not arrive, or when carefully-planned activities are canceled at the last minute for lack of transportation or adequate financing, this has a marked impact on the motivation of the personnel involved. Because PRODEF was a pilot project which received adequate funding to cover all planned activities, the morale of the Zairian personnel remained high.

One vital resource to family planning programs is an uninterrupted stock of all contraceptives. This proved difficult to assure in the national program as a whole, for the reasons outlined in the early section of this paper on administrative and logistic problems. In addition, in late 1987 there was a period in which pills and condoms were not available even in the central warehouse in Kinshasa, much less at the field level. In short, stockouts are not uncommon in FP service outlets around the country.

Matadi was better able to avoid stockouts than other locations for several reasons. First, communication with Kinshasa supplies was easier from Matadi than from other cities in the country. Second, the PRODEF project had its own vehicle which it could use to transport the products by road, thus circumventing the delays related to using an air freight company. Third, the PRODEF project sold a larger volume of contraceptives and could provide service statistics to support their requests for resupplies, factors which gave them somewhat of a "preferred client status" when supplies became low in the central warehouse.

Finally, it should be mentioned that the PRODEF activities were initiated as an operations research project. This had three salutatory effects on program implementation. First, it provided a vehicle for experimenting with CBD, a potentially controversial approach to FP service delivery. As has been noted elsewhere [17] operations research allows administrators to test out new strategies on a small scale in the name of "research." If they prove untenable, the failure is simply considered the "result" in a research project which can then be terminated. More often, the results are positive and provide the administrator with concrete findings which can be used to justify program continuation and/or expansion. Second, the results of Phase I of PRODEF provided useful orientation for the continuation of project activity in Phase II (replacing the salaried home visitors with house-depot distributors). And third, as mentioned above, because this was an operations research project, the directors and staff were very aware that the results would be closely monitored and worked to assure that they would be as favorable as possible.

F. Implications of the Matadi Success

1. Sustainability

At the close of the field portion of the operations research project in 1989, the prospects for family planning in Matadi looked strong, given the diversification of clinics providing contraceptives in this city. This was however predicated on the assumption that contraceptives would continue to be readily available and at an affordable cost. In the context of Zaire, this assumed external support, since the government would not have been able to sustain the national program at its current level.

As of 1989 it was less clear how that CBD portion would fare. PRODEF started as a distinct entity with organizational autonomy at a time when there were few other FP actors on the scene, and it served its role as a catalyst in significantly increasing the use of modern contraceptives. However, as other service providers came onto the scene, many users began to depend on other outlets for obtaining contraceptive services. PRODEF (in Matadi and elsewhere in Zaire) was incorporated into the activities of the national family planning program, which itself represented one of the main achievements of the initial operations research program (i.e. the institutionalization of this approach). However, budget restraints in effect as of 1989 in the national program meant that PRODEF/Matadi had to operate with a greatly reduced budget. With the operations research component completed, it was no longer in the "spotlight," and this too was expected to affect staff motivation.

It could be argued that the design of this project did not lend itself to replication, and that future operations research projects should strive to identify designs which are less resource intensive, whereby the cost per user can be readily absorbed by the health care system and by users. While both points are valid, it is important to remember that when PRODEF began, the national program had yet to be established; thus the purpose of the project was primarily to demonstrate the potential acceptability of family planning as a practice and of CBD as a service mechanism. Had the PRODEF project begun a decade later (and assuming evidence was available to show the acceptability of the CBD approach in Zaire,) it would have been possible to build CBD into the national project activities in a more cost-effective manner.

The political turmoil and social instability which surfaced in Zaire starting in 1990 has changed the prospects for family planning in the country as a whole, and by extension in Matadi. USAID, the major funder of population/family planning activities in this country, has closed its Mission in Zaire and will not be providing further support for the short run. It is doubtful that the Government of Zaire will have the funds or the political will to sustain family planning activities, and it is unclear at this time if other donors will step in to fill this void. In short, Matadi was one of the few cities in Zaire where modern contraceptive use was gaining momentum; yet the political events of the early 1990s give little reason to believe that the momentum can be sustained; more likely, modern contraceptive use will recede as supplies become increasingly inaccessible.

2. Ways The Program Could Have Been More Successful

In the specific case of PRODEF, at least two actions might have further increased the effectiveness of the project. First, greater efforts could have been made to assure that the

distributors who dropped out of the program were replaced, so as to ensure full coverage of the Matadi neighborhoods. Second, closer attention could have been paid to the "low performers," those who remained in the program but were relatively inactive. While attempts were made to address both these points, they could have been pursued more aggressively.

With regard to all service providers, PRODEF included, it would have been useful to focus more attention on the quality of care. Much of the effort of the national program was directed simply to getting services in the field, possibly at the expense of monitoring closely the technical quality of the services. This entails not only closer supervision, but a specific look at the elements which constitute quality of care.

When PRODEF was originally designed in 1980, there was considerable skepticism among Zairian officials that any change in contraceptive use could be achieved. PRODEF/Matadi was designed (1) with an aggressive strategy (household distribution) intended to bring about change, and (2) with a strong research component to measure change if in fact it occurred. While this project has provided evaluation data on changes in contraceptive prevalence which are lacking in many emerging programs in Africa, it may have been at the expense of reduced attention to service delivery.

III. Kananga: Clinical Services and Social Marketing

A. Characteristics of the City and its Population

The city of Kananga is located 800 kilometers east of Kinshasa, a one-hour flight by plane or a four-day trip over difficult roads. The city—fifth largest in Zaire with a population of 299,000 as of 1984—was built in the early 1900s as a railroad town. Today it is the administrative capital of the West Kasai region and an educational center with numerous poorly-equipped secondary schools and several university-level institutes. Kananga workers find few jobs available outside the government and educational system; unemployment is high. Most households "make do" by farming fields on the city outskirts and by petty trading.

Most Kananga women have attended school and are literate. In the Contraceptive Prevalence Survey of 1982 [3], 63 percent of the women aged 13 to 49 said they could read, including substantial proportions even at older ages (44 percent at ages 35-39 and 29 percent at ages 40-44). In a 1987 citywide survey [18], researchers asked the women to read a short passage in Tshiluba; 70 percent of the women were able to read it. The 1987 survey found that 48 percent of the women aged 13-49 had had at least some secondary schooling; an additional 44 percent had had primary schooling.

A considerable number of the women in the 1987 survey did some kind of work outside their homes, including over a third of the women in their 20's, two-thirds of women in their 30's, and three quarters of women in their 40's. Of those with outside work, two thirds were in some kind of trading, while an additional one-fourth did farming. Only a very few had salaried employment.

The economic underdevelopment of Kananga and the difficult transportation and communication systems were coupled with a high infant mortality rate. Estimated at 103 per 1000 live births, Kananga's rate was the highest of the 6 areas included in the 1982 survey.

The 1982 study showed that the women of Kananga married early, had high fertility, and wanted even higher fertility. The median age at first marriage or cohabitation was just over 15 years of age. Women aged 35-44 reported an average of more than 7 children ever borne. Eighty-three percent of women with 5 living children said they wanted more children, as did 69 percent of women with 6 or 7 living children, and 20 percent of women with 8 or more children. Limiting the number of children was not an acceptable idea among Kananga women. A 1988 study of 47 women who had had surgical sterilization [19] found that their median number of living children was 8. When asked the main reason that they had decided on sterilization, only 5 of the 47 women stated that it was because they had enough children. The others insisted that the main reason was to maintain their own health, or because they had difficulties with their last pregnancy.

In short, Kananga women had and wanted large numbers of children, and were unfavorable to the idea of *limiting* their births.

They were, however, using certain practices that had the effect of *spacing* their pregnancies. Breastfeeding was universal; 100 percent of the women in the 1987 survey who had a child 10 months of age or younger were breastfeeding; nearly three-quarters were still breastfeeding at 17 months. The medians of this cross-sectional study showed that the typical Kananga woman abstained from sexual relations for about 6 months after a birth, ovulated at 12 months, became pregnant at 21 months and stopped breastfeeding at 21 months. Most of the women who had babies under 24 months of age and who were at risk of pregnancy (had begun sexual relations and had ovulated) reported that they were currently using some method of contraception. Fifty per cent of these post-partum, at-risk women were using the calendar method or traditional methods (coitus interruptus or a special belt); fewer than ten percent were using modern contraceptive methods.

Among all Kananga women ages 13-49, modern contraceptives were generally known. In the 1987 survey, 99 percent knew of modern contraception, and they knew four different methods on the average. While 21 percent said they had ever used a modern method, only 4 percent of women in union were currently using one.

The attitudes of Kananga women toward contraception were largely favorable. The 1982 survey recorded 80 percent who said they approved of family planning, while 18 percent did not. The principal reasons cited by those who disapproved were that family planning was against God's will, that they did not yet have all the children they wanted, and that the methods were harmful to a woman's health.

B. Family Planning in Kananga, 1987-90

1. Limitations of Existing Service Delivery

Despite the high infant mortality, high fertility, and high fertility ideals described above, these were not the major program barriers in Kananga. Family planning had never taken hold because of the ineffectiveness and inertia of existing family planning programs.

Prior to the operations research project (referred to herein as the "Kananga Project") which began in 1987, there were a few health centers in the area offering limited family planning services. The national PSND project—which had identified Kananga as one of its target cities—had trained a few nurses from these centers and supplied them with some contraceptives, but could claim credit for no new family planning activities in Kananga. AZBEF, the IPPF affiliate, had established a regional committee, but the group had not met for several years.

One of the main service delivery problems in Kananga was obtaining contraceptives. The AZBEF office in Kinshasa had been the major contraceptive supplier in Zaire for 15 years. They usually had contraceptives but did not deliver them; someone had to travel to Kinshasa (800 kilometers away), go to the warehouse, purchase and carry away the supplies, and arrange air transport to Kananga.

In the mid-1980s, PSND became the main supplier of contraceptives in Zaire; the project had not only contraceptives but also the means to ship them to the interior. PSND administrative procedures, however, were cumbersome and tended to discourage the Kananga health centers from obtaining their supplies through this channel. Each individual health center had to sign an agreement of cooperation to obtain an initial supply of contraceptives; they then had to submit quarterly service statistics to the Kinshasa office (even though there was no reliable mail or courier service). The national office then began a long bureaucratic procedure to "replace" the contraceptives as stocks were drawn down. At best, these supplies arrived in Kananga 6-12 months after being requested.

These organizational difficulties remained the same throughout the period 1987-90, while the Kananga Project was active. The PSND continued to train a few Kananga nurses each year in a month-long course held several hundred kilometers away. It sent contraceptives to replace the ones used by some of the Kananga providers, but PSND did not simplify its contraceptive supply procedures. The PSND did appoint a Regional Coordinator (nurse-supervisor) to cover the two central regions in 1989, but this man had no car or motorcycle and rarely visited Kananga.

2. Project Activities

The Kananga Project began in 1987. It was carried out by the Institut Médical Chrétien du Kasai (IMCK, Christian Medical Institute of the Kasai) with support from USAID through a grant to the Population Council. The IMCK was a 35-year-old Zairian training institution, a pioneer in preventive health programs; IMCK's hospital and outpatient polyclinic offered primary, secondary and tertiary health care.

The main objective of the Kananga Project was to increase the use of modern contraceptive methods by improving service delivery through existing clinical facilities and retail sites (rather than establishing any new clinics or retail outlets). There were three main activities under this project.

a) **Clinical Services.** The Project made family planning clinical services more accessible to the public. IMCK's own family planning services (one at the downtown polyclinic, one at the hospital on the periphery of the city) were moved out of the crowded prenatal and gynecology clinics and into rooms with direct access from the street. An IMCK nurse was put on duty full-time at each facility for family planning clients, both men and women. These two clinics quickly attracted a large number of clients and became the Project training sites. The IMCK clinics offered contraceptive pills, injections, condoms, vaginal tablets, IUD, and NORPLANT; IMCK also offered female sterilization at its hospital.

The Project also sought to reinforce family planning service delivery in other clinics in Kananga. The Project's nurse-supervisor identified 12 other health centers and health posts interested in family planning services. Three were already offering some contraceptives and preferred to continue without Project input. Nine centers that had little or no family planning service were incorporated into the Project network for training, supervision and supplies. These clinics, scattered throughout the city, offered pills, injections, condoms, and vaginal tablets.

The Project provided a two-week apprenticeship for nurses (usually auxiliary level) from the participating clinics arranging for them to work side-by-side with the experienced nurses in the IMCK clinics. As each nurse-trainee completed her apprenticeship, the Project supervisor returned with her to her health center. They took the first supply of contraceptives and, in conference with the clinic director, they set up the place, time, and procedures for family planning services. The supervisor then visited the clinic at least once or twice a month. The objective was to establish reliable family planning in existing health centers in every section of the city.

In addition, the Project sponsored a semi-annual Saturday workshop organized by the nurse-supervisor for the nurses who had completed their IMCK apprenticeship. This session provided the nurses with an opportunity to review their skills and discuss problems.

b) **Social Marketing.** The project developed a social marketing branch, in conjunction with the national social marketing project in Kinshasa (described in the Introduction). Under this arrangement, the Project sold condoms, vaginal foaming tablets and pills wholesale to some 50 established pharmacies and shops in the Kananga area. Staff from the Kinshasa social marketing project trained the Kananga marketing coordinator and sent, on consignment, large supplies of condoms and foam as well as some advertising materials. The Kananga marketing activities functioned like the regular commercial wholesale trade in household and toilet items (except that selling prices to retailers were extremely low). Retailers were visited by the marketing coordinator but were "supervised" only loosely.

c) **I.E.C.** Information and communication activities announced the new and accessible contraceptive services. The primary target audience was mothers of young children, who were informed and counseled in maternity wards and in well-baby clinics throughout the city. The Project reached a more general public (men, women, and youth) in hospital and polyclinic

waiting areas and in group meetings organized by churches, schools, offices, businesses, and neighborhoods. In addition, a weekly radio program answered questions and interviewed local residents about family planning and AIDS.

The purposes of the communication program were to publicize service delivery points and to give specific information on modern contraceptives, not to persuade people to limit child-bearing or vaguely to "plan their families." The information team included three full-time staff, plus several part-time persons with valuable community contacts and communications skills.

The three Project activities were all underway by mid 1988, and service statistics reflected the intensified efforts. Whereas the two IMCK clinics had recorded fewer than 300 visits per clinic in 1987, this figure jumped to nearly 1500 in one facility and 3400 in the other in 1988 (Table 5). IMCK clinic visits remained at about the same level in 1989 and 1990. Meanwhile, nine other urban clinics were incorporated in the Project network and registered 1200 visits in 1988. They reached a peak of 2300 visits in 1989, representing one-third of the total clinic visits.

Table 6 shows clinical and social marketing output as Couple-Months-Protection (CMP) for the year preceding the Project and for the three Project years. Clinical services showed a five-fold increase to 37,000 CMP in the first Project year. Clinical CMP dropped slightly in 1989, then rose in 1990 to 42,000 CMP. Social marketing entered the Kananga scene in the second quarter of 1988; marketing sales provided only 5 percent of the total CMP in that year but rose to 22 percent in 1989 and 24 percent in 1990.

C. Indicators of Success in Kananga

As of the 1982 contraceptive survey, 2.6 percent (±1.2) of married women of reproductive age in Kananga used a modern contraceptive method. The 1987 baseline survey for the Kananga Project showed that prevalence had increased to only 4.1 percent (±1.4). Project activities began in December 1987, 36 months later in December 1990, prevalence had reached 17.4 percent (±2.4).

Table 7 indicates that during the years of very low prevalence of modern contraception (1982-87), female sterilization was the method being used by the most women at the time of the survey (but even so, by fewer than 2 percent). In 1990, after three years of Project activity, women using pills and condoms were more numerous than women who had had a sterilization. NORPLANT, introduced in Kananga. in 1988, was already being used by more women than either vaginal tablets on IUDs.

Table 5.
Total Visits in Family Planning Clinics of the Kananga Project Network in 1987-90

	1987	1988	1989	1990
IMCK Hospital	171	1,485	1,296	1,364
IMCK Polyclinic	275	3,379	3,233	3,292
Other urban clinics	60	1,200	2,261	1,167
Totals	506	6,064	6,790	5,823

D. Reasons for Success in Kananga

While the Kananga and Matadi projects differed substantially in approach, certain reasons for success were common to them both. In addition, there were several points unique to the Kananga situation.

1. Focus on a Single Goal

The IMCK provides a variety of medical services for the residents of Kananga, through preventive community health programs, large outpatient clinics, and a tertiary-level referral hospital; in addition, it offers basic training for nurses and laboratory technicians, intern and residency programs for physicians, and has a research center. Yet in the context of this specific project, family planning was the primary focus.

Table 6.
Couple-Months-Protection (CMP) Provided by Project Activities in Kananga

Year	CMP Through Clinical Services	CMP Through Social Marketing	Total CMP Distributed
1987			
1	1540	0	1540
2	1687	0	1687
3	1172	0	1172
4	2610	0	2610
Total	7008	0	7008
1988			
1	4292	0	4292
2	5931	171	6102
3	10944	629	11573
4	15900	1239	17139
Total	37067	2039	39106
1989			
1	6271	927	7198
2	10201	3432	13633
3	7011	3005	10016
4	12457	2520	14978
Total	35940	9884	45824
1990			
1	12291	2528	14819
2	8710	2500	11210
3	9274	3338	12612
4	11445	4651	16096
Total	41720	13017	54737

Table 7.
Use of Contraceptive Methods Among Women in Union, Ages 15-49, in Kananga

	1982	1987	1990
CURRENT USE (based on women currently in union)	n=669	n=826	n=968
Percent reporting current use of a modern method	2.6	4.1	17.4
Method currently used			
Female sterilization	1.3	1.7	3.8
Pill	0.6	0.6	6.4
Condom	0.3	0.6	4.4
Injectable	0.3	1.2	1.4
IUD	0.1	---	0.5
Vaginal tablets	---	---	0.2
NORPLANT	---	---	0.7

Figures drawn from reports of Kananga Contraceptive Prevalence Surveys: 1982 [3], 1987 [18], and 1990 [20].

The project concentrated on improvements in service delivery rather than on socio-cultural obstacles. The basic premise was that contraceptives had never been easily accessible to Kananga residents, so the first priority was to ensure access to services. Only if contraceptive prevalence rates failed to rise would one be justified in focusing on socio-cultural factors or exploring other barriers. To this end the two main strategies were:

- to use existing service points to deliver contraceptives: clinics, pharmacies, and shops.
- to assure constancy of personnel and supplies.

Clinic supervision was regular and never-ceasing. Moreover, the supervisor did whatever was necessary to assure the availability of services at all field sites. Problems occurred often at the participating health centers. Several of the trained nurses were swamped with all their former duties as heads of maternity wards or outpatient clinics and were given no time to devote to family planning. Others became ill, left on vacation or maternity leave, or moved away. In such a situation, a Project nurse went to every family planning session at the health center for several weeks, providing services herself if necessary, while working out difficulties and training another nurse on the spot. Clinic supervision took much more time and attention than originally envisioned, but it was judged to be essential to making contraceptives accessible.

Finally, Project staff concentrated all efforts on their target area, the city of Kananga. Project nurses received requests for training from outside health centers and distant hospitals; the information team was often asked to travel to schools and churches in other towns and cities. Rather than diluting energy and efforts through such travel, the Project invited nurses and others to come to Kananga to learn by doing, alongside active and enthusiastic team members. Only by

holding single-mindedly to its objective (to raise contraceptive prevalence in the city of Kananga) was the Project able to reach it.

2. Organizational Autonomy

The Kananga Project was lodged in the IMCK, a nongovernmental, nonprofit institution which had operated in and around Kananga for 35 years. In this context decisions could be made at the local level (without reference to a higher authority in Kinshasa) on all aspects of project design and implementation.

The Project maintained friendly links with other organizations but did not depend upon them. The staff kept regional health authorities informed of its activities, but acted at the level of local health centers and pharmacies. Furthermore, the Project maintained working relations with groups outside the Ministry of Health, both government agencies (Ministry of Women's Affairs, Institute of Statistics, Teacher Training Institute, the army, and the radio station) and nongovernmental groups (industries, Catholic and Protestant schools and churches). Thus the Project, lodged in a nongovernmental church-related health institution, maintained its independence from any one government agency.

This organizational autonomy allowed the Project the flexibility to take on unforeseen tasks when necessary. In the initial stages of the Project, the staff tried to work with the regional family planning committee and health authorities. At one early meeting, the different groups agreed on a basic city-wide plan and divided the tasks: training and public information would be handled by the Project, clinic supervision by district physicians, and contraceptive supplies by the family planning committee. After a few months, however, it became obvious that the other groups had neither the means nor the interest to assure supervision and contraceptive supplies. They were perfectly willing for the Project to do everything; reluctantly the Project accepted responsibility for all four aspects of family planning in Kananga.

This same autonomy allowed the Project to set up a contraceptive procurement system, whereby health centers, pharmacies and retailers could buy contraceptives locally, thus getting around the procurement problems outlined above. A large drug depot, located in Kananga and operated by a Protestant church group, made the system possible. The depot staff agreed to receive large shipments of contraceptives from the national suppliers, purchasing them and paying air transport when necessary. The depot resold the contraceptives at cost, plus a small administrative fee, to any health center approved by the Kananga Project supervisors. This depot system assured contraceptive supplies for all 16 Kananga clinics.

3. Simple Information Systems with Rapid Feedback

Information from service statistics and field research could be translated immediately into new program emphases. Specific examples include the following.

- Clinic records of new contraceptive acceptors in 1988 were compared with 1987 survey data on the general female population. Women over age 35, women with less than a secondary education, and women who had never used any modern contraceptive were underrepresented among clinic clients. The team discussed and tried ways to appeal to the underserved groups.

- Clinic records and discussions with nurses revealed that many Kananga women disliked the irregular bleeding or amenorrhea caused by contraceptive injections and implants. Focus group research explored just what women found unpleasant and why, so that nurses and communicators could counsel them more effectively.
- Communicators kept notes on questions asked in public meetings and information sessions. These questions became the basis for weekly radio programs.

4. Selection and Training of Personnel

The Project team members were carefully selected according to educational and family criteria and were trained locally. The Zairians, 11 women and 5 men, were all Kananga natives or long-time residents. Seven had university degrees in the social sciences or humanities. The three teaching nurses had high school diplomas. The other six team members had not completed their secondary school. To maximize the Project's credibility among the local population, only people who had children and were in stable family situations were hired. Nearly all were contraceptive users themselves. In addition, two expatriates worked part-time on the Project, a public health physician and an anthropologist, both with 10 years of experience in Zaire.

The Zairian team members had no previous family planning training. They were all trained for project duties in small workshops and on the job. The Project coordinator was a middle-aged Zairian woman with a graduate degree in psychology. She worked hard at building team spirit through weekly staff meetings and constant attention to personal and work-related problems. Salaries were commensurate with or slightly higher than public sector jobs; the Project offered financial incentives for overtime community work during evenings and weekends. Team-building and long-term planning was done at semi-annual team retreats.

With regard to the training of nurses from participating clinics, the approach was practical. During the two-week on-the-job training at the IMCK, these nurses learned to listen to clients, to help clients choose and use appropriate contraceptive methods, and to keep simple records on clients and supplies. Each trainee received and began using a basic clinic manual [21]. This training was reinforced by the semi-annual Saturday workshops in which the participants used the case study method [22] to review their skills and discuss problems they had experienced in their own clinics.

Some clinics also designated women "aides" to learn communication skills in family planning. During a two-week apprenticeship, these trainees worked alongside experienced Project communicators in outpatient waiting areas, well-baby clinics, maternity wards, and community meetings.

5. Emphasis on Quality of Care

Good quality of care was defined as quick, efficient, friendly service that satisfied the clients. Project success was measured by contraceptive prevalence rates in the community, not by continued attendance at particular clinics. Nevertheless, good clinical service was seen as the basis and backup for the whole effort. The clinic staff used and taught these rules of thumb:

- Clients come for contraceptives; don't let them leave without one.
- Try to give them the methods they want.

- In and out in 15 minutes - no long waits.
- The best way to get new users to continue contraception is to satisfy them the first time.
- Don't ask a lot of useless questions.
- Let the clients know they are always welcome. They can come back any time for any problem and won't have to pay.
- Every communicator should be a user; let's make every user a communicator.

6. Sensitivity to Local Conditions

The Project was sensitive to traditional attitudes, religious feelings, and economic forces in Kananga. First, educational themes stressed traditional values: the importance of breastfeeding and of spacing pregnancies to ensure the survival and health of children and mothers.

Second, the Project got under way just as the first AIDS patients were diagnosed in Kananga. The information team capitalized on the public demand for facts on AIDS and sex education; they offered sessions on AIDS, family planning, or both. The team's public openness and truthfulness gave them credibility and brought many invitations for education sessions, even to secondary schools and Catholic parishes.

Third, potential conflict with Catholic groups was minimized. The Project sometimes received criticism from persons who praised natural family planning and denigrated modern methods. Project staff members, some of them Catholics themselves, maintained relations with members of opposing groups on a quiet, personal level. They avoided public confrontation whenever possible; privately they agreed to disagree.

Fourth, the Project let local market forces operate. It did not try to control contraceptive retail prices but did manage to keep them low. In Zaire, citizens paid for all medical care, whether public or private; they tended to distrust services or medicines that were free. Thus clients expected to pay for contraceptives. In the IMCK family planning clinics, a three-month injection or three cycles of pills cost about US$.25; 30 condoms or 30 foam tablets cost US$.30; an IUD cost US$.30. Clients paid nothing for a visit to get information or to ask questions. They paid only when they received contraceptives. The client fees in fact covered approximately the cost of the (subsidized) contraceptive, clinic supplies and most of the nurse's salary. Family planning clinics at other Kananga health centers were at liberty to set their own prices; most followed the fee scale set at IMCK.

The Project sold specially-packaged social marketing condoms and foam tablets to retailers at US$.02 each. Retail pharmacies and shops could mark them up to any price they wished; commercial prices remained reasonably low, because the Project assured supplies to saturate the market.

E. Sustainability

The Kananga Project suggests that a demand existed in the city for modern contraceptive services. During the Project, a large number of persons became informed and experienced contraceptive users. At the end of the Project, staff members believed that contraceptive use could continue to rise if contraceptives continued to be truly accessible to the public.

Clinical family planning services in urban health centers can probably be financially self-supporting; client fees can cover the costs of supplies, subsidized contraceptives, and a nurse's part-time salary. It is evident, however, that health centers can offer regular contraceptive services only if continuous training, supervision, and supplies are guaranteed. It is unclear that the national family planning agencies will assume these tasks in the near future. IMCK is prepared to continue training and supervision, with outside donor support. The Institute has been active in Kananga health care and training for 35 years and has offered contraceptive services for more than 15 years. There is every indication that IMCK will remain the primary actor in family planning in Kananga over the long term.

The major barrier to continued family planning services in Kananga will be the uncertainty of contraceptive supplies. Kananga service providers depend upon the major donors (USAID, IPPF, UNFPA) to send free contraceptives for both clinics and social marketing. They depend upon the private sector infrastructure of ships, trucks, planes, and shipping agents to get supplies into Zaire and then to Kananga.

Neither donated supplies nor transportation infrastructure can any longer be assumed in Zaire. National political and economic events in 1990-91 caused several major donors to stop support, including future contraceptive donations. Widespread unrest and pillaging in late 1991 severely damaged the transportation infrastructure. Even if donated contraceptives again become available, heroic efforts will be needed to get them to Kananga users.

IV. Conclusions

Both the projects described here, Matadi and Kananga, helped various health providers in the city to offer clinical family planning services. Beyond that, the two approaches differed markedly. PRODEF/Matadi concentrated on pioneering community-based distribution of contraceptives, with carefully supervised distributors. The Kananga Project, on the other hand, emphasized clinical supervision and pleasing the clients; it introduced social marketing with other loose supervision of retailers; in addition, an information team specialized in face-to-face group meetings and a weekly radio program.

From these two experiences, it is difficult to pinpoint "The Factor" which was responsible for success. Yet certain elements were common to both the Matadi and Kananga projects, despite the differences in approach between the two. The common factors which emerge from these experiences which most directly contributed to their success were as follows.

A single-minded dedication on the part of the staff to making family planning work.

In both Matadi and Kananga the key project staff identified strongly with family planning, judged their own performance in terms of the degree to which the project was achieving its objectives, and were sustained through the more difficult moments by an *esprit de corps* which developed among the project staff.

An uninterrupted supply of contraceptive methods available through multiple outlets.

In the case of Matadi, the clinic-based facilities were complemented by the network of some 25 CBD posts and a number of private pharmacies; in Kananga, contraceptives were available at the two IMCK clinics, 9 other health centers and at some 50 retail outlets which sold social marketing products. In both cases, a variety of contraceptives was continuously available to the population at numerous locations in the city and at affordable prices.

The organizational autonomy necessary to respond to problems as they arise.

In both cities the projects were administered locally, and action could be taken promptly to address the problems which constituted barriers to service delivery. For example, in Kananga the Project eventually established a regional depot for contraceptive supplies as a result of the problems with contraceptive procurement which they had previously experienced. In both cities, this organizational autonomy gave the project personnel a greater sense of identification with project goals and responsibility in achieving project objectives.

Regular and supportive supervision of those responsible for service delivery.

Both projects put great importance on maintaining regular contact with clinic personnel, as well as distributors (in the case of Matadi). These contacts bolstered morale, not only by indicating that the project administration was closely following the activities of specific individuals in the system, but also by transmitting to these service providers the same enthusiasm for project activities as was felt by the staff themselves. While the supervisory visits included administrative functions such as collecting service statistics and controlling inventory, they were handled in a friendly, non-threatening manner which served to encourage the service providers to perform their tasks well.

Available resources to support project activities.

Both Matadi and Kananga were operations research projects which received special funding to experiment with approaches for increasing contraceptive prevalence. This in part explains their organizational autonomy, and may well have contributed to the sense of purpose and esprit de corps which developed among project staff. In contrast to the larger scale programs of the PSND and AZBEF, which in recent years have operated with significant financial constraints, these two projects had funds available to cover the activities planned, and their staff could program events with the confidence that monies would be available to carry them out. In this sense it would be somewhat unfair to compare the success of Matadi and Kananga with other cities in Zaire where the inputs have been less concentrated. In sum, special funding does not insure an increase in contraceptive prevalence, but it may indeed contribute significantly to the likelihood of its happening.

By the same token, it would be incorrect to assume that only a pilot project could hope to achieve the results found in Matadi and Kananga, or that these conclusions have little bearing on the larger family planning programs in Zaire. The factors outlined above—developing a strong sense of mission among staff members, ensuring an uninterrupted supply of contraceptives through multiple outlets, and establishing a system of regular, supportive supervision—can be applied to large scale programs as well. Even the issue of organizational autonomy can be partially addressed by decentralization, with greater decision-making conferred on those responsible for programs at the regional level. Indeed, the findings from these two case studies

would suggest that these four actions would be those most useful in replicating the successes of Matadi and Kananga in other cities in Zaire.

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